Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

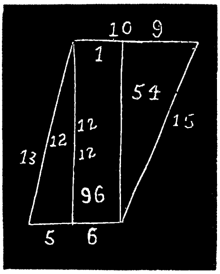
Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

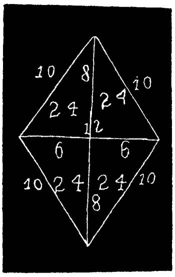
JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

of the base; the remainder is one. The 1 from the 10 of the upper side leaves 9, which is the length of the remainder of the upper base, (which remainder is the base) of the right-angled triangle. And the 12 of the perpendicular by the 5 of the base=60, ½ of which is 30; of so many acres is the right-angled triangle in it. And the 12 by the 1=12; of so many acres is the rectangle in it. And 12 by the 9 of the base=108, ½ of which is 54; of so many acres is the other right-angled triangle. Altogether, 96 acres. And the figure will be as follows:



If there be given a rhomb such as the one drawn below, according to the conditions of the problem, the 10 squared=100, and ½ of the 12 of the base is 6. This squared=36. Subtract this (from 100); the remainder is 64, of which the square root is 8, which is the length of the perpendicular. This by the (6) of the base=48, ½ of which is 24; of so many acres is each of the right-angled triangles. Altogether, 96 acres.

And the figure will be as follows.



NOTE.—In order to economize space, the figures are set in the paragraphs to which they belong instead of following them. F.

DEPARTMENTS.

SOLUTIONS OF PROBLEMS.

ARITHMETIC.

166. Proposed by **F. P. MATZ**, Sc. D., Ph. D., Professor of Mathematics and Astronomy in Defiance College, Defiance, Ohio.

A teacher's monthly salary after $m=2$ increases of $p=20$ and $q=10\%$, is $\$M=\$120$. What was the original salary?

Solution by **G. B. M. ZERR**, A. M., Ph. D., The Temple College, Philadelphia, Pa., and **G. W. GREENWOOD**, A. B., McKendree College, Lebanon, Ill.

$$\text{Original salary}=\$M/[(1+p)(1+g)\text{.....to } m \text{ terms})$$
$$=\$120/[(1.10)(1.20)]$$
$$=\$120\times\tfrac{10}{11}\times\tfrac{5}{6}=\$90\tfrac{10}{11}.$$